

We claim:

- 1    1.    An actuator, in particular for a fuel injection valve, comprising:  
2        - a top plate having at least one duct opening in particular for a respective  
3        electric contact pin, onto which a contact stud carrier with a contact stud can be  
4        located, wherein the duct opening is protected on its open side against the  
5        ingress of plastic during extrusion coating,  
6        - a sealing washer attached to the open side of the duct opening, wherein the  
7        sealing washer is embodied to cover the top side of the top plate in an  
8        overlapping manner at least in the area of the duct opening, thereby hermetically  
9        sealing the duct opening.
- 1    2.    The actuator according to claim 1, wherein the sealing washer is embodied in the  
2        area of the duct opening with a thickening protruding at least partially into the  
3        duct opening.
- 1    3.    The actuator according to claim 1, wherein the sealing washer can be fixed into  
2        position on the top side of the top plate and can preferably be secured there by  
3        means of an adhesive.
- 1    4.    The actuator according to claim 1, wherein a sprung element is provided which  
2        presses the sealing washer against the open side of the duct opening.
- 1    5.    The actuator according to claim 1, wherein an actuator length can be specified  
2        between the contact stud of the contact stud carrier and a reference edge of the  
3        actuator independently of the thickness of the sealing washer.
- 1    6.    The actuator according to claim 1, wherein the sealing washer comprises an  
2        insulating plastic material.

- 1 7. The actuator according to claim 1, wherein the sealing washer is embodied at  
2 least partially from metal.
- 1 8. The actuator according to claim 1, wherein the actuator has a piezoelectric  
2 element.

- 1 9. Fuel injector for use in an internal combustion engine comprising an actuator  
2 comprising:  
3 - a top plate having at least one duct opening in particular for a respective  
4 electric contact pin, onto which a contact stud carrier with a contact stud can be  
5 located, wherein the duct opening is protected on its open side against the  
6 ingress of plastic during extrusion coating,  
7 - a sealing washer attached to the open side of the duct opening, wherein the  
8 sealing washer is embodied to cover the top side of the top plate in an  
9 overlapping manner at least in the area of the duct opening, thereby hermetically  
10 sealing the duct opening.
- 1 10. The fuel injector according to claim 9, wherein the sealing washer is embodied  
2 in the area of the duct opening with a thickening protruding at least partially into  
3 the duct opening.
- 1 11. The fuel injector according to claim 9, wherein the sealing washer can be fixed  
2 into position on the top side of the top plate and can preferably be secured there  
3 by means of an adhesive.
- 1 12. The fuel injector according to claim 9, wherein a sprung element is provided  
2 which presses the sealing washer against the open side of the duct opening.
- 1 13. The fuel injector according to claim 9, wherein an actuator length can be  
2 specified between the contact stud of the contact stud carrier and a reference  
3 edge of the actuator independently of the thickness of the sealing washer.
- 1 14. The fuel injector according to claim 9, wherein the sealing washer comprises an  
2 insulating plastic material.
- 1 15. The fuel injector according to claim 9, wherein the sealing washer is embodied  
2 at least partially from metal..

- 1 16. A method of manufacturing an actuator for a fuel injector in an internal  
2 combustion engine comprising the steps of:  
3 - providing the actuator having a top plate and at least one duct opening for a  
4 respective electric contact pin,  
5 - attaching a sealing washer to the open side of the duct opening, wherein the  
6 sealing washer is embodied to cover the top side of the top plate in an  
7 overlapping manner at least in the area of the duct opening, thereby hermetically  
8 sealing the duct opening,  
9 - placing a contact stud carrier with a contact stud onto a top plate of the  
10 actuator, thereby protecting the duct opening on its open side against the ingress  
11 of plastic during extrusion coating.
- 1 17. The method according to claim 16, further comprising the step of fixing the  
2 sealing washer into position on the top side of the top plate and preferably  
3 securing the sealing washer there by means of an adhesive.
- 1 18. The method according to claim 16, further comprising the step of providing a  
2 sprung element which presses the sealing washer against the open side of the  
3 duct opening.
- 1 19. The method according to claim 16, further comprising the step of specifying an  
2 actuator length between the contact stud of the contact stud carrier and a  
3 reference edge of the actuator independently of the thickness of the sealing  
4 washer.
- 1 20. The method according to claim 16, further comprising the step of extrusion  
2 coating the actuator.